QC ABSTRACT

NAME OF WORK: Improvements To Roads At 5th, 6th, 7th, 2nd Main, 3rd Main Kalyana Nagara and Surrounding Area In Ward No 13 Shettyhalli Sub Division.

SL NO	Item Of Work	Name of Test	Frequency of Test/Quantity	Executed Quantity	Number of Tests Required	Number of Tests Conducted
		Materials				
1	WMM	Sieve Analysis	One Test		1	1
		Impact Value	One Test		1	1
		Flakiness Index	One Test		1	1
		Elongation Index	One Test		1	1
2	BM	SIEVE ANALYSIS	One Test		1	1
		STRIPPING VALUE	One Test		1	1
		Flakiness Index	One Test		1	1
		Elongation Index	One Test		1	1
		IMPACT VALUE	One Test		1	1
		Specific gravity	One Test		1	1
		Water Absorption	One Test		1	1
		Marshal Stability	One Test		1	1
		Marshal flow	One Test		1	1
		Percent air Voids	One Test		1	1
		Percent Voids in mineral Aggregate	One Test		1	1
		Percent Voids filled with Bitumen	One Test		1	1
		Density	One Test		1	1
		Gradation	One Test		1	1
3	BC	SIEVE ANALYSIS	One Test		1	1
		STRIPPING VALUE	One Test		1	1
		Flakiness Index	One Test		1	1
		Elongation Index	One Test		1	1
		IMPACT VALUE	One Test		1	1
		Specific gravity	One Test		1	1
		Water Absorption	One Test		1	1
		Marshal Stability	One Test		1	1
		Marshal flow	One Test		1	1
		Percent air Voids	One Test		1	1
		Percent Voids in mineral	One Test		1	1
		Percent Voids filled with Bitumen	One Test		1	1
		Density	One Test		1	1
		Gradation	One Test		1	1
4	BITUMEN	Ductility	One Test		1	1
		Softening Point	One Test		1	1
		Penetration	One Test		1	1
		Flash Point	One Test		1	1
		Fire Point	One Test		1	1
5	TACK COAT	Rate of spread	One Test		1	1

Assistant Executive Engineer
Shettyhalli Sub -Division

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TEST RESULTS OF GRADATION FOR WMM

Lab ID	:	CP-RW-2021-08-11-13 Date: 20-03-21
Customer	:	Assistant Executive Engineer, Shettyhalli Sub Division, BBMP, Bangalore.
Address	:	Shettyhalli Sub Division, BBMP, Bangalore.
Project Name	:	Improvements To Roads At 5th, 6th, 7th, 2nd Main, 3rd Main Kalyana Nagara and Surrounding Area In Ward No 13 Shettyhalli Sub Division.
Agency	:	Sri Manoj Naik B M, # 58, 3rd Main, Manasa Layout, Kengeri Upanagara, Bangalore - 60
Customer Reference	:	EE/DD/W.O/119/2020-21
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	18-03-21
Type of Mix	:	WMM (Wet Mix Macadam)
Date of Test	:	18-03-21
Oven Dry Weight	:	11000 Grams

IS Sieve Size(mm)	Weight Retained (gm)	Cumulative Weight Retained (gm)	% Cumulative Weight Retained	% Passing	Spec.I.Vide Table 400.13 MORTH Specification
53	0	0	0.0	100.0	100
45	310	310	2.8	97.2	95-100
22.4	2248	2558	23.3	76.7	60-80
11.2	2176	4734	43.0	57.0	40-60
4.75	2251	6985	63.5	36.5	25-40
2.36	1619	8604	78.2	21.8	15-30
0.6	623	9227	83.9	16.1	8-22
0.075	1352	10579	96.2	3.8	0-5

* The results obtained are satisfactory as per standard requirements.

Note:-

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TEST REPORT OF AGGEGRATE IMPACT VALUE
IS: 2386 Part IV

Lab ID	:	**CP-RW-2021-08-11-13**	**Date: 20-03-21**
Customer	:	Assistant Executive Engineer, Shettyhalli Sub Division, BBMP, Bangalore.	
Address	:	Shettyhalli Sub Division, BBMP, Bangalore.	
Project Name	:	Improvements To Roads At 5th, 6th, 7th, 2nd Main, 3rd Main Kalyana Nagara and Surrounding Area In Ward No 13 Shettyhalli Sub Division.	
Agency	:	Sri Manoj Naik B M, # 58, 3rd Main, Manasa Layout, Kengeri Upanagara, Bangalore - 60	
Customer Reference	:	EE/DD/W.O/119/2020-21	
Source of Sample	:	Sample supplied by Agency	
Sample Condition	:	Satisfactory	
Date of Receipt	:	18-03-21	
Type of Mix	:	Coarse Aggregate for WMM (Wet Mix Macadam)	
Date of Test	:	18-03-21	

Sl.No	Particulars of observations	Index	TEST 1	TEST 2
1	Total weight of the surface dry sample sample (passing 12.5 mm and retained on 10mm sieve)	A	300.2	300.2
2	Weight of fraction passing 2.36mm sieve After giving 15 blows	B	73.9	74.0
3	weight of fraction retained 2.36mm sieve After giving 15 blows	C	225.9	225.8
4	Total weight of (B+C) is less than the initial weight (Weight A) by more than one gram the result shall be discarded and a fresh test made.	A-(B+C)	0.4	0.4
5	Aggregate impact value	(B/A)*100	24.6	24.7
6	Aggregate impact value (Mean of two tests)	Pecentage	24.6	

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DETERMINATION OF FLAKINESS INDEX AND ELONGATION INDEX OF COARSE AGGREGATE(IS 2386 (Part 1) 1963 (RA 2007)

Lab ID	:	**CP-RW-2021-08-11-13** **Date: 20-03-21**
Customer	:	Assistant Executive Engineer, Shettyhalli Sub Division, BBMP, Bangalore.
Address	:	Shettyhalli Sub Division, BBMP, Bangalore.
Project Name	:	Improvements To Roads At 5th, 6th, 7th, 2nd Main, 3rd Main Kalyana Nagara and Surrounding Area In Ward No 13 Shettyhalli Sub Division.
Agency	:	Sri Manoj Naik B M, # 58, 3rd Main, Manasa Layout, Kengeri Upanagara, Bangalore - 60
Customer Reference	:	EE/DD/W.O/119/2020-21
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	18-03-21
Type of Mix	:	Coarse Aggregate for WMM (Wet Mix Macadam)
Date of Test	:	18-03-21

Result:

Index	Percentage of Flakiness and Elongation Index	Secified limits as per MORTH specification table 400-12
Flakiness Index	12.8%	Combined Flakiness & Elongation Index for WMM is Maximum 35%
Elongation Index	12.5%	
Combined Flakiness and Elongation Index for WMM	25.3%	

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Shettyhalli Sub -Division

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TEST RESULTS OF GRADATION FOR BM
(IS 2386:(Part 1) 1963 (RA2011)

Date: 05-04-21

Lab ID	:	CP-RW-2021-08-11-13
Customer	:	Assistant Executive Engineer, Shettyhalli Sub Division, BBMP, Bangalore.
Address	:	Shettyhalli Sub Division, BBMP, Bangalore.
Project Name	:	Improvements To Roads At 5th, 6th, 7th, 2nd Main, 3rd Main Kalyana Nagara and Surrounding Area In Ward No 13 Shettyhalli Sub Division.
Agency	:	Sri Manoj Naik B M, # 58, 3rd Main, Manasa Layout, Kengeri Upanagara, Bangalore - 60
Customer Reference	:	EE/DD/W.O/119/2020-21
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	03-04-21
Type of Mix	:	BM-Plant (Bituminous Macadam)
Date of Test	:	03-04-21
Weight of Sample(gm)	:	5000

IS Sieve Size(mm)	Weight Retained(gm)	Comulative Weight Retained (gm)	Comulative % of Retained	Comulative % of Passing	Specification Limits as per MORTH specification Table 500-7(grading -2)
26.5	0	0	0	100	100
19	155	155	3.1	96.9	90-100
13.2	512	667	13.3	86.7	56-88
4.75	2758	3425	68.5	31.5	16-36
2.36	910	4335	86.7	13.3	4-19
0.3	358	4693	93.9	6.1	2-10
0.075	230	4923	98.5	1.5	0-8
PAN	77	5000	100.0	0.0	0

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PHYSICAL REQUIREMENTS FOR COARSE AGGREGATE FOR BITUMINOUS MACADAM

Date: 06-04-21

Lab ID	:	CP-RW-2021-08-11-13
Customer	:	Assistant Executive Engineer, Shettyhalli Sub Division, BBMP, Bangalore.
Address	:	Shettyhalli Sub Division, BBMP, Bangalore.
Project Name	:	Improvements To Roads At 5th, 6th, 7th, 2nd Main, 3rd Main Kalyana Nagara and Surrounding Area In Ward No 13 Shettyhalli Sub Division.
Agency	:	Sri Manoj Naik B M, # 58, 3rd Main, Manasa Layout, Kengeri Upanagara, Bangalore - 60
Customer Reference	:	EE/DD/W.O/119/2020-21
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	03-04-21
Type of Mix	:	BM (Bituminous Macadam)
Date of Test	:	03-04-21

Table 500-6 : Physical Requirements fo Coarse Aggregate for Bituminous Macadam

Property	Test	Result	Specification	Method of Test
Partical Shape	Flakiness Index	13.8	Combined Flakiness & Elongation Index for BM is Maximum 35%	IS:2386 Part I
	Elongation Index	7.2		
Strength	Aggregate Impact Value	25.2	Maximum 30%	IS:2386 Part IV
Specific gravity	Specific gravity	2.51	Maximum 2.7	IS:2386 Part III
Water Absorption	Water Absorption	0.17	Maximum 2%	IS:2386 Part III

* The results obtained are satisfactory as per standard requirements.

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TEST REPORT OF AGGEGRATE STRIPPING VALUE OF ROAD AGGRGATE (IS:6241)

Lab ID	:	**CP-RW-2021-08-11-13** **Date: 06-04-21**
Customer	:	Assistant Executive Engineer, Shettyhalli Sub Division, BBMP, Bangalore.
Address	:	Shettyhalli Sub Division, BBMP, Bangalore.
Project Name	:	Improvements To Roads At 5th, 6th, 7th, 2nd Main, 3rd Main Kalyana Nagara and Surrounding Area In Ward No 13 Shettyhalli Sub Division.
Agency	:	Sri Manoj Naik B M, # 58, 3rd Main, Manasa Layout, Kengeri Upanagara, Bangalore - 60
Customer Reference	:	EE/DD/W.O/119/2020-21
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	03-04-21
Type of Mix	:	BM(Bitumnous Macadam)
Date of Test	:	03-04-21
Type of Binder	:	60/70
% of Binder Used	:	5.0%
Weight of Aggregate	:	200.0 gm
Weight of Binder	:	10.0 gm
Temperature of water bath	:	40°C

No of test	Retained Stripping Percentage	Stripping Percentage	Average Retained Stripping Percentage	Secified limits as per MORTH specification table 500-8
1	98.0	2.0	98.2	Minimum Retained Coating 95%
2	98.5	1.5		
3	98.0	2.0		

* The results obtained are satisfactory as per standard requirements.

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TESTS RESULTS ON STABILITY OF MIX

Lab ID	:	**CP-RW-2021-08-11-13** **Date: 06-04-21**
Customer	:	Assistant Executive Engineer, Shettyhalli Sub Division, BBMP, Bangalore.
Address	:	Shettyhalli Sub Division, BBMP, Bangalore.
Project Name	:	Improvements To Roads At 5th, 6th, 7th, 2nd Main, 3rd Main Kalyana Nagara and Surrounding Area In Ward No 13 Shettyhalli Sub Division.
Agency	:	Sri Manoj Naik B M, # 58, 3rd Main, Manasa Layout, Kengeri Upanagara, Bangalore - 60
Customer Reference	:	EE/DD/W.O/119/2020-21
Source of Sample	:	Hot Mix Plant, Bangalore
Sample Condition	:	Satisfactory
Date of Receipt	:	03-04-21
Type of Mix	:	BM (Bituminous Mecadam)
Date of Test	:	03-04-21

The results of the tests conducted on the Bituminous Macadam mix sample are as follow

Sl.No	Particulars of observations	TEST 1	TEST 2	Secified limits as per MORTH specification table 500-11
1	Marshal Stability at 60°C, KN	11.29	11.82	9KN(Min)
2	Marshal flow at 60°C, mm	3.54	3.87	2-4
3	Percent air Voids	4.56	4.17	3-5
4	Percent Voids in mineral Aggregate(VMA %)	14.54	14.76	13-15
5	Percent Voids filled with Bitumen(VFB %)	68.98	70.28	65-75
6	Density, g/cc	2.42	2.40	–

* The results obtained are satisfactory as per standard requirements.

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Certificate No.: TC-5548

TEST RESULTS OF GRADATION FOR BC
IS 2386 (Part 1) 1963 (RA 2007)

Lab ID : CP-RW-2021-08-11-13 Date: 16-04-21

Customer : Assistant Executive Engineer, Shettyhalli Sub Division, BBMP, Bangalore.

Address : Shettyhalli Sub Division, BBMP, Bangalore.

Project Name : Improvements To Roads At 5th, 6th, 7th, 2nd Main, 3rd Main Kalyana Nagara and Surrounding Area In Ward No 13 Shettyhalli Sub Division.

Agency : Sri Manoj Naik B M, # 58, 3rd Main, Manasa Layout, Kengeri Upanagara, Bangalore - 60

Customer Reference : EE/DD/W.O/119/2020-21

Source of Sample : Sample supplied by Agency

Sample Condition : Satisfactory

Date of Receipt : 14-04-21

Type of Mix : BC-Plant (Bituminous Concrete)

Date of Test : 14-04-21

Oven Dry Weight : 5000 Grams

IS Sieve Size (mm)	Weight Retained (gm)	Comulative Weight Retained (gm)	Comulative % of Retained	Comulative % of Passing	Secified limits as per MORTH specification table 500-17(grading-2)
19	0	0	0.0	100.0	100
13.2	70	70	1.4	98.6	90-100
9.5	700	770	15.4	84.6	70-88
4.75	895	1665	33.3	66.7	53-71
2.36	587	2252	45.0	55.0	42-58
1.18	492	2744	54.9	45.1	34-48
0.6	503	3247	64.9	35.1	26-38
0.3	528	3775	75.5	24.5	18-28
0.15	458	4233	84.7	15.3	12-20
0.075	350	4583	91.7	8.3	4-10
PAN	417	5000	100	0.0	0

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